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that in nearly every case these observers were using *reflectors*, of apertures varying between 6 and 12-inch, but I have heard from observers who have used achromatics varying between 4 and 8-inch, that they distinctly remarked the change in colour, although they do not seem to have seen it so plainly as those who have used reflectors. Unfortunately, none of these observers have published the results of their observations.

There is a singular agreement between observers who have described this phenomenon. The colour has been described as yellow, ochreish, brown, and tawny. All agree in ascribing this colour to the equatorial belt of the planet, ordinarily seen of a pure, or at most a pearly white.

The change has been one that might have been easily observed even by those who have not a quick eye for colour, by reason of the fact that the equatorial belt, which is ordinarily the brightest portion of the disk of the planet, and is so represented in every drawing I have ever seen of it, was, during the last presentation, much darker in colour than the bright belts nearer to the north and south poles of the planet.

Clapham, June 10th.

On the Proper Motion of Groombridge, 1830.

By W. T. Lynn, B.A.

In the year 1842 Professor Argelander announced* that he had detected that a star of the seventh magnitude on the boundaries of the constellations *Ursa Major* and *Canis Venatica* was animated by a Proper Motion considerably exceeding that known for any other star; amounting, in fact, annually to about 7″ of a great circle. This star had been observed by Groombridge, being numbered 1830 in his Catalogue of Circumpolar Stars, which was reduced to the epoch January 1, 1810, and edited by the Astronomer Royal, the date of publication being 1838. Having ascertained from Mr. Airy the exact times of Groombridge's observations, Argelander was able, the year after his discovery, to state† that the star's annual Proper Motion amounted to $+5''{\cdot}167$ in R.A. and $+5''{\cdot}70$ in N.P.D. This satisfied within the limits of probable error of observation all the other positions observed by Lalande, Bessel, Argelander, and Nicolai.

It occurred to me recently that, as a large number of very accurate observations of this star had been made at the Royal Observatory, Greenwich, since the year 1843, in which Professor Argelander made this determination, and that these observations extended now over more than a quarter of a century, it might be worth while to put them together, with the view of ascertaining whether the large Proper Motion in question continues uniform.

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* *Astronomische Nachrichten*, No. 455.

† Ibid. No. 475.

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This comparison I now offer to the Society; remarking that, by the kind permission of the Astronomer Royal, I am enabled to include the result of the whole of the positions contained in the New Seven-year Catalogue of 2760 Stars, which is now passing through the press, and also that derived from the observations made last year, which are still in manuscript. In bringing back the observations to the 1st of January of the year which forms the epoch of each catalogue, the proportional part of the proper motion, as given by Argelander and copied into the British Association Catalogue, has been carefully applied. This had not indeed been done in the 12-year and 6-year Catalogues; but at the end of the 7-year Catalogue for 1860, published as an Appendix to the *Greenwich Observations* for 1862, will be found (pages {cxxi.} and {cxxiii.}) the positions which would have been given in those catalogues, had this been done.

Positions of *Groombridge*, 1830.

Epoch.	R.A. h m s	No. of Obs.	N.P.D. ° ′ ″	No. of Obs.	Authority.
1845	11 44 1·53	13	51 10 10·90	16	12-year Catalogue.
1850	11 44 19·04	17	51 12 20·04	19	6-year Catalogue.
1860	11 44 53·91	18	51 16 37·44	8	7-year Cat. (1860).
1864	11 45 7·83	8	51 18 21·22	8	7-year Cat. (1864).
1869	11 45 25·24	2	51 20 29·84	2	Gr. Obs. 1869, MSS.

From this we obtain the following mean annual variations for the years comprised between each successive epoch:—

Years.	Ann. Var. in R.A. s	Ann. Var. in N.P.D. ″
1845–1850	+3·502	+25·83
1850–1860	3·487	25·74
1860–1864	3·480	25·94
1864–1869	+3·482	+25·72

If we subtract from each of these the annual precession, which in R.A. is $+3^{s}\cdot 144$, and in N.P.D. $+20''\cdot 01$, we find finally for the annual Proper Motion in each interval the following values:—

Years.	Proper Motion in R.A. s	Proper Motion in N.P.D. ″
1845–1850	+0·358	+5·82
1850–1860	0·343	5·73
1860–1864	0·336	5·93
1864–1869	+0·338	+5·71

The constancy, or nearly so, of the Proper Motion of this star, would seem, therefore, to be established.

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